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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
|-----------------|-------------|----------------------|---------------------|

09/138,146 08/21/98 BAILLIE

M 2-2

EXAMINER

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MMC2/0524

CLARK S

ART UNIT

PAPER NUMBER

2815

DATE MAILED:

05/24/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademark

Office Action Summary

| | |
|-------------------------------|-------------------------------|
| Application No. 09/138,146 | Applicant(s) Baillie et al |
| Examiner S.V.Clark | Group Art Unit 2815 |

Responsive to communication(s) filed on the communicaiton filed 4-10-2000

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, which ever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1-20

Of the above, claim(s) 8-20 is/are pending in the application.

Claim(s) _____ is/are withdrawn from consideration.

Claim(s) 1-7 is/are allowed.

Claim(s) _____ is/are rejected.

Claims _____ is/are objected to.

are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) _____

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received:

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

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-- SEE OFFICE ACTION ON THE FOLLOWING PAGES --

Art Unit: 2815

Claims 4, 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear where the upper surface of the wells are discussed and shown in the drawings. The wells are depicted as having open upper structure and therefore having no upper surface.

It is unclear what is meant by the use of "continuous" in said claims 6 and 7. It is unclear how the nature of the structure is continuous. If the wells are separate and distinct is unclear how they can be continuous. What part of the well structure is or is not continuous?

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5 and 7 are rejected under 35 U.S.C. 102 (b) as being anticipated by MC Shane et al.

McShane et al shows a base 40. An inner and outer wells formed by through holes 34 are shown formed about the periphery of the base. The inner well has an outer wall coupled to the inner wall of the outer well. And a chip 52 is shown positioned on the base.

Said wells are shown to be distinct and separate and therefore discontinuous.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McShane et al.

McShane discloses that the wells may be formed of dielectric and metal materials and the lack of a description of particular materials is deemed to suggest use of conventional materials.

Conventional materials well known in this technology used in circuit board structures would include such materials as polyimides and flexible metals such as copper and aluminum. Metal and substrate thickness would also determine the level of flexibility of said structure. As the claim provides no specifics that characterize flexible it is deemed that McShane teaches obvious use of flexible materials for the reasons mentioned above.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5, 6 and 7 rejected under 35 U.S.C. 102(b) as being anticipated by Budde.

Budde shows a base 5. An inner and outer wells 11 are shown formed about the periphery of the base. The inner well has an outer wall coupled to the inner wall of the outer well.

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And a chip 3 is shown positioned on the base. Said wells are shown to be formed of a continuous material of metal and said wells are also shown to be distinct and separate and therefore discontinuous.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

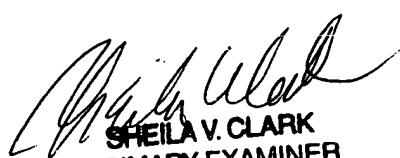
Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Budde.

Budde discloses that the wells may be formed of metal materials (i.e. copper and aluminum) that have flexible characteristics shown by the bendability of the bended structure. Metal and substrate thickness would also determine the level of flexibility of said structure. As the claim provides no specifics that characterize flexible it is deemed that Budde teaches obvious use of flexible materials for the reasons mentioned above.

Claims 1-7 are rejected. Claims 8-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 6.

Any inquiry concerning this communication should be directed to Examiner S. V. Clark at telephone number (703) 308-4924.

May 21, 2000



SHEILA V. CLARK
PRIMARY EXAMINER

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